AI detection of optical cables

Fortunately, work crews and cable-chewing animals leave optical signatures that we can detect. With help from AI, we can determine the nature and location of a given threat or cut and ...

This study explores AI-driven methodologies that can augment the capabilities of optical fiber sensor networks across various domains. By transforming sensor data into actionable insights, ...

A novel AI-based co-cable and co-trench optical fibre detection method is proposed based on twin neural network and extraction of multimodal features, e.g. fibre static, dynamic, and site features.

Distributed Acoustic Sensing (DAS) enables continuous monitoring by detecting vibrations along submarine fiber-optic cables, offering maritime situational awareness. These ...

This study explores the deployment of YOLOv8s for detecting anomalies in fiber optic cables mounted on poles, with a focus on climbing activities and environmental impediments.

The integration of artificial intelligence (AI) with optical fiber sensing (OFS) is transforming the capabilities of modern sensing systems, enabling smarter, more adaptive, and higher ...

In a surveillance application, the high sensitivity of fiber optics cables toward surrounding vibrations enables proximity detection and also the prevention of damage to associated industries or high ...

Advances in ML/AI for fiber in recent years have improved signal processing, pattern recognition and anomaly detection, enabling faster and more accurate interpretation of sensory data.

By utilizing laser signals transmitted through fiber cables and analyzing these signals with AI algorithms, this study enables real-time monitoring and assessment of the security of telecom ...

This paper presents a comprehensive review of the application of AI techniques for improving performance of optical communication systems and networks.

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